

Statement of Jerry A. Hausman

1. My name is Jerry A. Hausman. I am MacDonald Professor of Economics at the Massachusetts Institute of Technology in Cambridge, Massachusetts, 02139.
2. I received an A.B. degree from Brown University and a B.Phil. and D.Phil. (Ph.D.) in Economics from Oxford University where I was a Marshall Scholar. My academic and research specialties are econometrics, the use of statistical models and techniques on economic data, and microeconomics, the study of consumer behavior and the behavior of firms. I teach a course in "Competition in Telecommunications" to graduate students in economics and business at MIT each year. Competition among broadcast TV, cable networks, direct to home satellite (DTH) providers, newspapers, and radio is one of the primary topics covered in the course. In December 1985, I received the John Bates Clark Award of the American Economic Association for the most "significant contributions to economics" by an economist under forty years of age. I have received numerous other academic and economic society awards. My curriculum vitae is attached as Exhibit 1.
3. I have done significant amounts of research in the telecommunications industry. I have published numerous papers in academic journals and books about telecommunications. I have also done research and published academic papers regarding advertising on broadcast TV, cable TV, and radio.
4. I have previously submitted Declarations to the Commission regarding the competitive impacts of policies affecting DTH, DBS, cable TV, and broadcast TV service offerings. I have also submitted Declarations regarding competition between cable TV and DTH and broadcast TV. I have previously made presentations to the Department of

Justice regarding competition in TV, cable TV, and radio. I have also served as a consultant to the Tribune Corporation over the past decade. Tribune owns broadcast TV stations, radio stations, and newspapers. I have also consulted for a variety of companies that sell consumer goods and do large amounts of advertising, *e.g.*, Budweiser, Kodak, and Revlon.

5. In March 2002, I submitted a Declaration to the Commission that included two empirical studies of the effects of consolidation in the radio industry that has occurred since the passage of the Telecommunications Act of 1996. In the first study I found that consolidation did not lead to higher prices for radio advertising, while in the second study I found that consolidation has resulted in increases in format diversity. In January 2003, I submitted a Statement to the Commission that extended the previous research in two ways. First, I collected data on actual rates charged by radio stations in additional markets that have experienced significant increases in concentration, and I performed additional econometric analyses of the effect of these increases in concentration on advertising prices. Second, I collected data on cable television advertising prices to study whether cable advertising provides a competitive substitute for radio advertising. The results from the first part of my further study confirmed that, across all size markets, consolidation has not led to higher radio advertising prices, even where the top two firms control more than eighty percent of the revenue. The results of the second part of my further study show a statistically significant relationship between increases in cable television advertising prices and the prices of radio advertising.

6. One of the core principles of economics is that exchanges of assets and property tend to be beneficial, both to the immediate parties in the exchange as well as to

consumers and producers who ultimately benefit from lower prices and better services made possible by market exchanges. From an economic perspective, potential harms from market exchanges occur only under exceptional circumstances. The potential economic harms from market exchanges between and among commercial firms are largely the subject of antitrust laws.

7. Antitrust laws provide a means to account for the exceptional case of potential economic harms from acquisitions or exchanges between commercial firms. Economic antitrust analyses of mergers are based on a case-by-case examination of the potential changes in consumer welfare resulting from a merger between two companies.¹ These analyses are not based ultimately on arithmetic indices.² The economic recommendations to remedy the unusual case of harm resulting from a proposed merger do not rely on arithmetic indices or predetermined prohibitions on broad classes of possible mergers.

8. The FCC's newspaper cross-ownership rule prohibits all ownership exchanges of media licenses -- both transactions that would be economically beneficial to consumers and the exceptional case that might be harmful to consumers. The federal antitrust agencies, the Department of Justice and the Federal Trade Commission, have far better tools to distinguish the economic effects of proposed mergers than the FCC in its application and enforcement of the newspaper/broadcast cross-ownership rule.

9. Many economic studies of media ownership have been conducted in recent years including a few that I have authored, such as those described in the Declaration and

¹ I analyze how to analyze mergers using a consumer welfare standard in J. Hausman and G. Leonard, "Economic Analysis of Differentiated Products Mergers Using Real World Data," George Mason Law Review, 5, 3, 1997.

² For example, the Department of Justice and Federal Trade Commission Horizontal Merger Guidelines (Merger Guidelines, April 2, 1992) state: "However, market share and concentration data provide only the starting point for analyzing the competitive impact of a merger." (§ 2.0) The HHI index is calculated from market share and concentration data.

Statement that I submitted to the FCC in March 2002 and January 2003, respectively, and that are discussed above in Paragraph 5. I am aware of no economic study, and certainly none that I have authored, that would conclude that any form of newspaper/broadcast cross-ownership rule administered by the FCC would be economically superior to relying instead on the antitrust reviews of the federal antitrust agencies. Indeed, to the extent that such a rule raises the costs of economically beneficial exchanges, and would prohibit many useful exchanges, such a newspaper/broadcast cross-ownership rule decreases both economic efficiency and consumer welfare.

10. The observation that advertising markets may include both newspapers and broadcast outlets is not a basis of support for a newspaper/broadcast cross-ownership rule, as I concluded in the studies discussed in Paragraph 5. Mergers among firms that compete in the same market often increase competition and consumer welfare.³ The empirical finding that advertising markets contain TV, radio, newspapers, and cable TV means that antitrust authorities would continue to review mergers between newspapers and broadcast outlets, as they have done in the past.⁴ For example, the Department of Justice in recently reviewing and approving News Corporation's proposed acquisition of Chris-Craft Industries, required News Corporation to divest a broadcast television channel in Salt Lake City, because of a concern that advertising prices would increase without the divestiture.⁵

³ The Merger Guidelines state: "While challenging competitively harmful mergers, the Agency seeks to avoid unnecessary interference with the larger universe of mergers that are either competitively beneficial or neutral." (§ 0.1)

⁴ I expect that Internet advertising also competes in this market, but available data has not yet permitted me to test this hypothesis.

⁵ See *US v. The News Corporation Ltd. Fox Television Holdings, Inc., and Chris-Craft Industries, Inc.* Proposed Final Judgment and Competitive Impact Statement, 66 FR 29997, June 4, 2001.

11. While the government may have non-economic objectives to intervene in markets such as the newspaper/broadcast cross-ownership rule, such a rule cannot rely on economic studies, including mine, for support.

12. In addition to providing advertising, media outlets also provide content (such as news and entertainment) to consumers. The study by Professor Joel Waldfogel attempts to determine whether different media are substitutes for one another from the perspective of consumers.⁶ Prof. Waldfogel's results provide no support for a newspaper/broadcast cross-ownership rule.

13. Prof. Waldfogel's assertion that different media are substitutes for one another is largely based on his analysis of individual-level survey data. Prof. Waldfogel constructs measures of relative news use for each medium by calculating how much people use each medium for news relative to their use of the medium for other purposes. Prof. Waldfogel then runs a regression of relative news use for one medium on the measures of relative news use for the other media. Prof. Waldfogel interprets a negative and statistically significant coefficient to mean that news in one medium serves as a substitute for news in another medium.

14. Prof. Waldfogel's claim that his regression results provide evidence of media substitution is incorrect. An alternative interpretation of his results is that consumers prefer to obtain their news from a particular medium. Some people may mainly rely on newspapers while other people rely on TV for their main source of news. This interpretation would result in a negative correlation between news use of one medium and news use of other media. Because of this alternative explanation, Prof. Waldfogel's

⁶ J. Waldfogel, "Consumer Substitution Among Media," Federal Communications Commission, Media Ownership Working Group Paper No. 3, September 2002.

regression results cannot be used to claim that different media serve as substitutes for one another.⁷

15. An additional problem with Prof. Waldfogel's analysis is that it focuses entirely on statistical significance and not economic significance. His individual-level regressions contain almost 180,000 observations. Since statistical precision increases with sample size, it is not surprising that all of the coefficients he reports in Table 14 on p. 76 are statistically significantly different from zero at the 1% level. However, a coefficient that is statistically significant is not necessarily economically significant. For example, the coefficient on the TV relative news use variable in the newspaper regression (Column 4) is -0.0002 and is statistically significant. If one looked only at measures of statistical significance (as Prof. Waldfogel does), one would conclude that TV news substitutes for newspapers. However, an analysis of the economic significance of this coefficient leads to a very different conclusion. This coefficient indicates that an increase of one half-hour of TV news per week reduces the probability of reading a daily newspaper by approximately 0.02 percentage points. Hence while the effect of TV news use on newspaper use is statistically significant it is economically insignificant. Prof. Waldfogel's failure to consider the economic significance of his results provides yet another reason his results cannot be relied upon.

16. As I discuss above in Paragraph 7, arithmetic indices such as the HHI provide only a starting point for analyzing the competitive impacts of mergers. The economic theory of oligopoly justifies the use of the HHI for this purpose, because under certain circumstances the HHI is a function of the price-cost margin and the market elasticity of

⁷ Indeed, Waldfogel's analysis of aggregate data, which does not suffer from this potential problem, finds almost no evidence of substitution among media.

demand.⁸ Thus, changes in the HHI may indicate the changes in economic performance such as the price-cost margin of an oligopoly, following the merger of two firms.

17. In contrast, there is no economic theory that links diversity-related outcomes to underlying market structure. Nor would a “diversity index” yield predictions of changes in diversity in a market, following a merger of two firms. A merged firm may find it to be profitable to increase the diversity of its content offerings. My previous empirical research that I submitted to the Commission found that an increase in format diversity often followed after mergers had occurred in a given market. Hence, any attempt to create a “diversity index” based on market structure measures would be arbitrary and not have a basis in economic theory. An arbitrary “diversity index” would not predict either the economic performance or amount of diversity that would follow after the merger of two firms.

⁸ See, e.g., J. Hausman *et al.*, “A Proposed Method for Analyzing Competition Among Differentiated Products,” *Antitrust Law Journal* 60, 1992. An alternative justification for the use of the HHI was provided by George Stigler, who showed that the HHI could be related to the likelihood of collusion. See G. Stigler, “A Theory of Oligopoly,” *Journal of Political Economy* 72, 1964.

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FELLOWSHIPS, HONORS AND AWARDS:

Phi Beta Kappa
Marshall Scholar at Oxford, 1970-1972
Scholarship at Nuffield College, Oxford, 1971-1972
Fellow, Econometric Society, 1979.
Frisch Medal of the Econometric Society, 1980
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John Bates Clark Award of the American Economic Association, 1985
Jacob Marschak Lecture for the Econometric Society, 1988
Fellow, National Academy of Social Insurance, 1990
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Fellow, Journal of Econometrics, 1998.
Shann Memorial Lecture for the Australian Economics Society, 2003

EMPLOYMENT:

1992- MASSACHUSETTS INSTITUTE OF TECHNOLOGY
John and Jennie S. MacDonald Professor
1979- Professor, Department of Economics
1976-79 Associate Professor, Department of Economics
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VISITING APPOINTMENTS:
1986-87 Visiting Professor, Harvard Business School
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Associate Editor, Bell Journal of Economics, 1974-1983
 Associate Editor, Rand Journal of Economics, 1984-1988
 Associate Editor, Econometrica, 1978-1987
 Reviewer, Mathematical Reviews, 1978-1980
 American Editor, Review of Economic Studies, 1979-82
 Associate Editor, Journal of Public Economics, 1982-1998
 Associate Editor, Journal of Applied Econometrics, 1985-1993
 Member of MIT Center for Energy and Environmental Policy Research, 1973-
 Research Associate, National Bureau of Economic Research, 1979-
 Member, American Statistical Association Committee on Energy Statistics, 1981-1984
 Special Witness (Master) for the Honorable John R. Bartels, U.S. District Court for the Eastern District of New York in Carter vs. Newsday, Inc., 1981-82
 Member of Governor's Advisory Council (Massachusetts) for Revenue and Taxation, 1984-1992
 Member, Committee on National Statistics, 1985-1990
 Member, National Academy of Social Insurance, 1990-
 Member, Committee to Revise U.S. Trade Statistics 1990-1992
 Director, MIT Telecommunications Economics Research Program, 1988-
 Board of Directors, Theseus Institute, France Telecom University, 1988-1995
 Member, Conference on Income and Wealth, National Bureau of Economic Research, 1992-
 Member, Committee on the Future of Boston, 1998
 Advisory Editor, Economics Research Network and Social Science Research, 1998-
 Advisory Editor, Journal of Sports Economics, 1999-
 Member, GAO Expert Panel to advise USDA on Econometric Models of Cattle Prices, 2001-2

PUBLICATIONS:**I. Econometrics**

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- "Minimum Distance and Maximum Likelihood Estimation of Structural Models in Econometrics," delivered at the European Econometric Congress, Grenoble: August 1974.
- "Full-Information Instrumental Variable Estimation of Simultaneous Equation Models," Annals of Economic and Social Measurement, October 1974.
- "Estimation and Inference in Nonlinear Structural Models," Annals of Economic and Social Measurement, with E. Berndt, R.E. Hall, and B.H. Hall, October 1974.
- "An Instrumental Variable Approach to Full-Information Estimators in Linear and Certain Nonlinear Econometric Models," Econometrica, 43, 1975.
- "Simultaneous Equations with Errors in Variables," Journal of Econometrics 5, 1977.
- "Social Experimentation, Truncated Distributions, and Efficient Estimation," with D. Wise, Econometrica, 45, 1977.
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- "Attrition Bias in Experimental and Panel Data: The Gary Income Maintenance Experiment," with D. Wise, Econometrica, 47, 1979.
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- "The Econometrics of Labor Supply on Convex Budget Sets," Economic Letters, 1979.
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- "Comparing Specification Tests and Classical Tests," with W. Taylor, August 1980, Economic Letters, 1981.
- "The Effect of Time on Economic Experiments," invited paper at Fifth World Econometrics Conference, August 1980; in Advances in Econometrics, ed. W. Hildebrand, Cambridge University Press, 1982.
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- "Full-Information Estimators," in Kotz-Johnson, Encyclopedia of Statistical Science, vol. 3, 1983
- "Instrumental Variable Estimation," in Kotz-Johnson, Encyclopedia of Statistical Science, vol. 4, 1984
- "Specification Tests for the Multinomial Logit Model," with D. McFadden, Econometrica, 52, 1984.
- "Econometric Models for Count Data with an Application to the Patents R&D Relationship," with Z. Griliches and B. Hall, Econometrica, 52, 1984.
- "The Econometrics of Nonlinear Budget Sets," Fisher-Shultz lecture for the Econometric Society, Dublin: 1982; Econometrica, 53, 1985.
- "The J-Test as a Hausman Specification Test," with H. Pesaran, Economic Letters, 1983.

- "Seasonal Adjustment with Measurement Error Present," with M. Watson, Journal of the American Statistical Association, 1985.
- "Efficient Estimation and Identification of Simultaneous Equation Models with Covariance Restrictions," with W. Newey and W. Taylor, Econometrica, 55, 1987.
- "Technical Problems in Social Experimentation: Cost Versus Ease of Analysis," with D. Wise, in Social Experimentation, ed. J. Hausman and D. Wise, 1985.
- "Errors in Variables in Panel Data," with Z. Griliches, Journal of Econometrics, 1986.
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- "Semiparametric Identification and Estimation of Polynomial Errors in Variables Models," with W. Newey, J. Powell and H. Ichimura, Journal of Econometrics, 1991.
- "Flexible Parametric Estimation of Duration and Competing Risk Models," with A. Han, Journal of Applied Econometrics, 1990.
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- "Seasonal Adjustment of Trade Data," with R. Judson and M. Watson, ed. R. Baldwin, Behind the Numbers: U.S. Trade in the World Economy, 1992.
- "Nonlinear Errors in Variables: Estimation of Some Engel Curves," Jacob Marschak Lecture of the Econometric Society, Canberra 1988, Journal of Econometrics, 65, 1995.
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- "Microeconometrics", Journal of Econometrics, 2000.
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"Triangular Structural Model Specification and Estimation with Application to Causality", Journal of Econometrics, 2003

"Weak Instruments: Diagnosis and Cures in Empirical Econometrics", with J. Hahn, Dec. 2002, forthcoming in American Economic Review, 2003.

II. Public Finance and Regulation

"The Evaluation of Results from Truncated Samples," with D. Wise, Annals of Economic and Social Measurement, April 1976.

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